

11th Annual | VIVO Conference 2020

# An Innovation Lab Experience in a Federal Agency

Manoel Brod Siqueira, José F. Salm Jr., Talita M. de Oliveira, Fabiene Ferreira



MINISTÉRIO DA  
EDUCAÇÃO

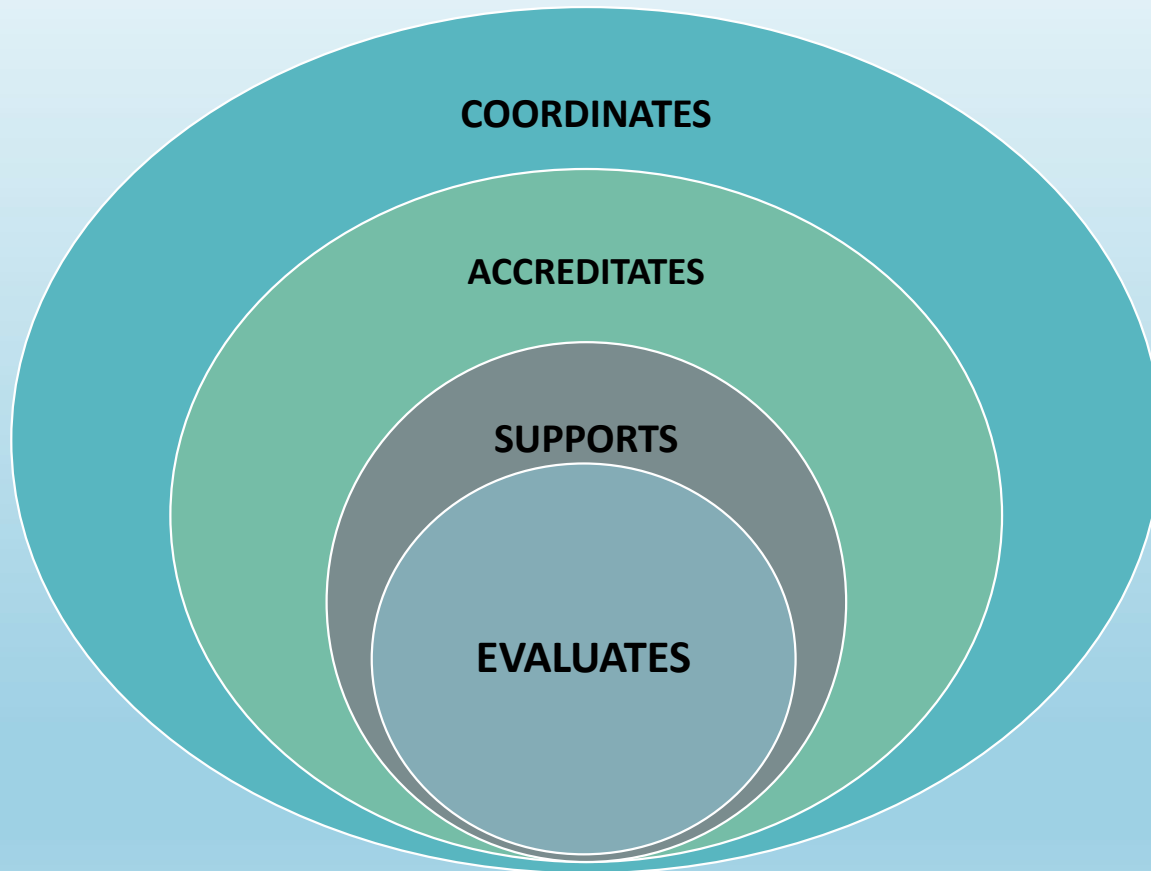


PÁTRIA AMADA  
**BRASIL**  
GOVERNO FEDERAL



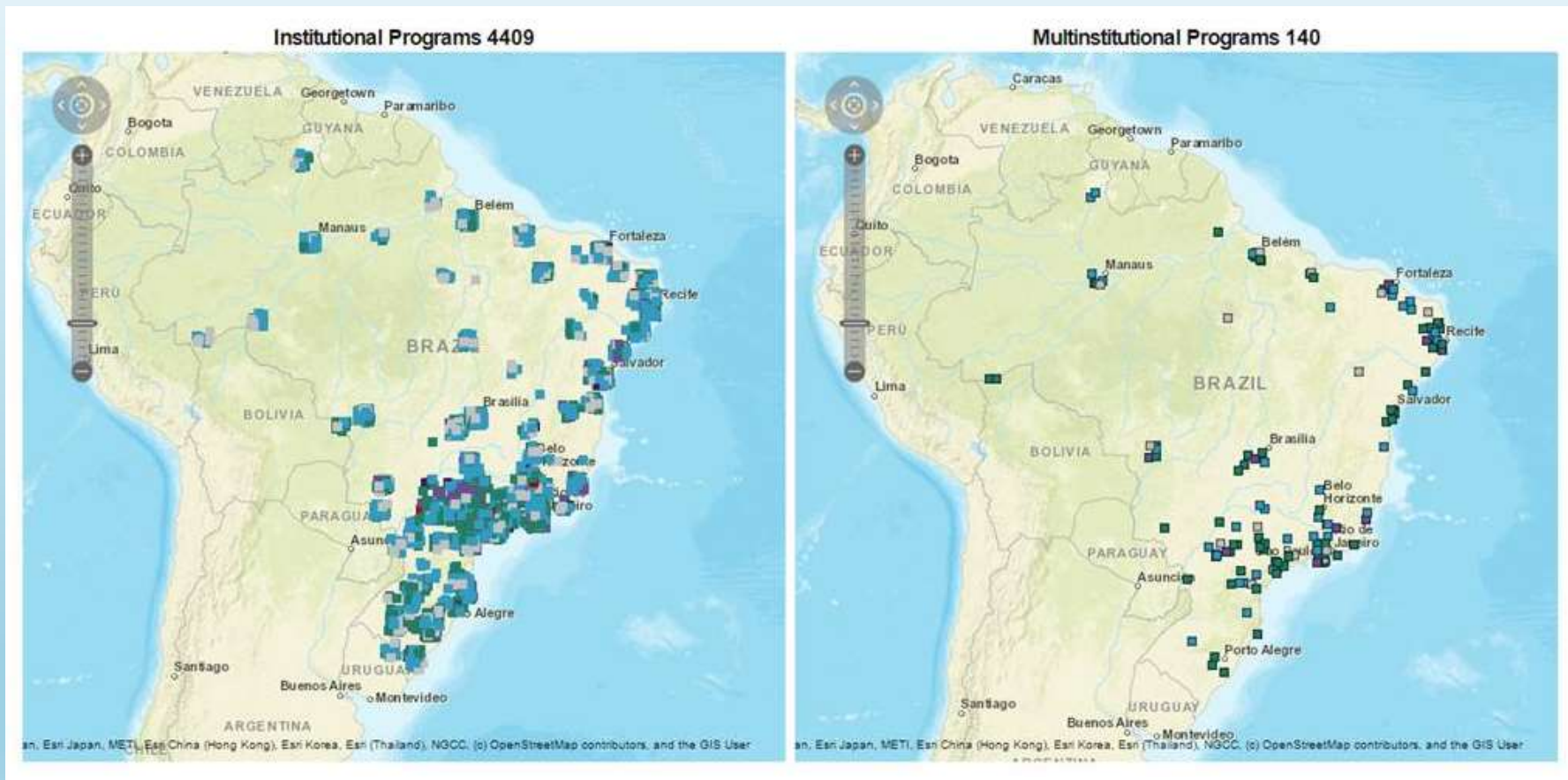
GOVERNO DE  
**SANTA  
CATARINA**

# CAPES' MISSION



CAPES Headquarters in Brasilia - Brazil

# THE NATIONAL GRADUATE SYSTEM (SNPG) 2019



> 500 HEIs

# THE NATIONAL GRADUATE SYSTEM (SNPG) 2019

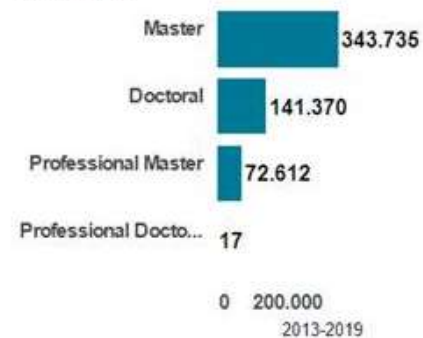
Total of graduate degrees on  
2013-2019

557.734

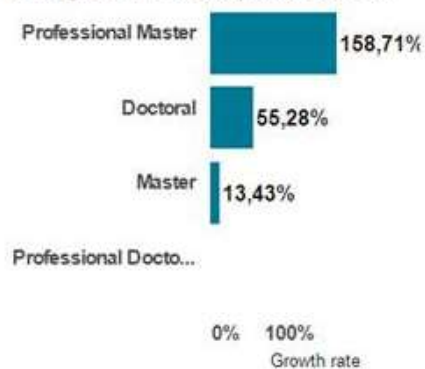
2019 growth rate compared to 2013  
of total of graduate degrees

36,18%

Total of graduate degrees on  
2013-2019



2019 growth rate compared to 2013



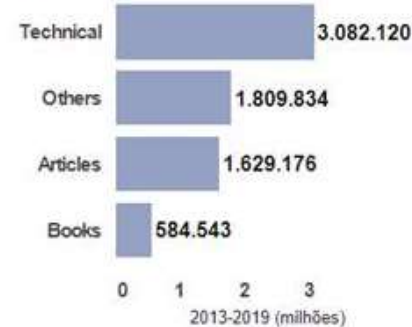
Total of graduate scientific  
productions on 2013-2019

7.105.673

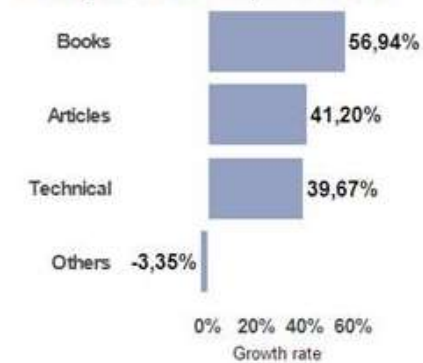
2019 growth rate compared to 2013  
of total of graduate scientific  
productions

28,52%

Total of graduate scientific  
productions on 2013-2019



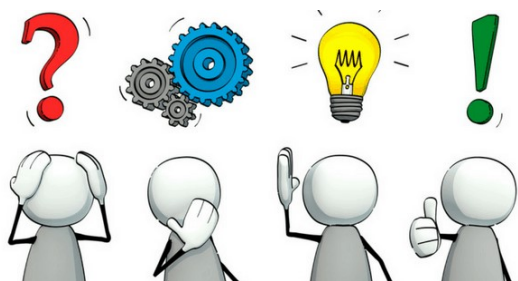
2019 growth rate compared to 2013



<https://sucupira.capes.gov.br/sucupira/>



**INNOVATION**LAB



## Challenges

- Improving evaluation process to U-Multirank
- FAIR Data
- More Research, Less Paperwork



## Innovation

- Co-creation with users
- Partnerships with research groups and startups
- Multidisciplinary team (IT, statistical, librarian, UX, DT)



## CAPES' Graduate Vocabulary

[http://vocab.capes.gov.br/def/ver/1.0.3/2020-01-17/vcav\\_1.0.3\\_2020-01-17.rdf](http://vocab.capes.gov.br/def/ver/1.0.3/2020-01-17/vcav_1.0.3_2020-01-17.rdf)

## CAPES' Open and Linked Data

<https://dadosabertos.capes.gov.br/>

The image shows a browser window with two main sections. The top section displays an XML file viewer for 'vcav\_1.0.3\_2020-01-17.rdf'. The XML content includes a namespace declaration for 'http://vocab.capes.gov.br/def/vcav#' and a description in Portuguese: 'Vocabulário da Avaliação da CAPES fornece um conjunto mínimo de classes e propriedades RDF para representar as 4 entidades mais elementares do processo de avaliação dos programas de pós-graduandos brasileiros, que são: a pessoa natural, o projeto de pesquisa, a organização de ensino e a produção intelectual.' It also contains an English abstract: 'The Assessment Vocabulary provides a minimum set of RDF classes and properties for describing the 4 most elementary entities of the Brazilian postgraduate assessment exercise: the natural person, the research project, the educational organization and their research products.' The XML also lists authors like 'Irene Prestes Uchoa' and 'RNP'.

The bottom section shows the 'dadosabertos.capes.gov.br' website. The header includes navigation links like 'Conjuntos de dados', 'Temas', 'Grupos', and 'Sobre', along with a search bar. The main content area is titled 'Conjuntos de dados' and shows a search for 'Avaliação da Pós-Graduação Stricto Sensu' resulting in '32 conjuntos de dados encontrados'. A specific dataset is highlighted: '[2017 a 2020] Docentes da Pós-Graduação Stricto Sensu no Brasil', with a description: 'Os dados da seção contêm informações sobre os docentes da pós-graduação stricto sensu no Brasil. Esta versão apresenta os dados para os anos de 2017 e 2018, os dois primeiros...'. Download options for CSV, XLSX, PDF, HTML, and RDF are provided.

# Mission

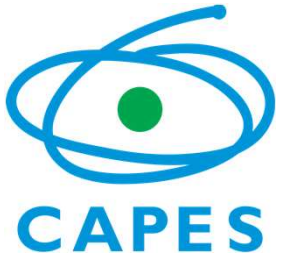
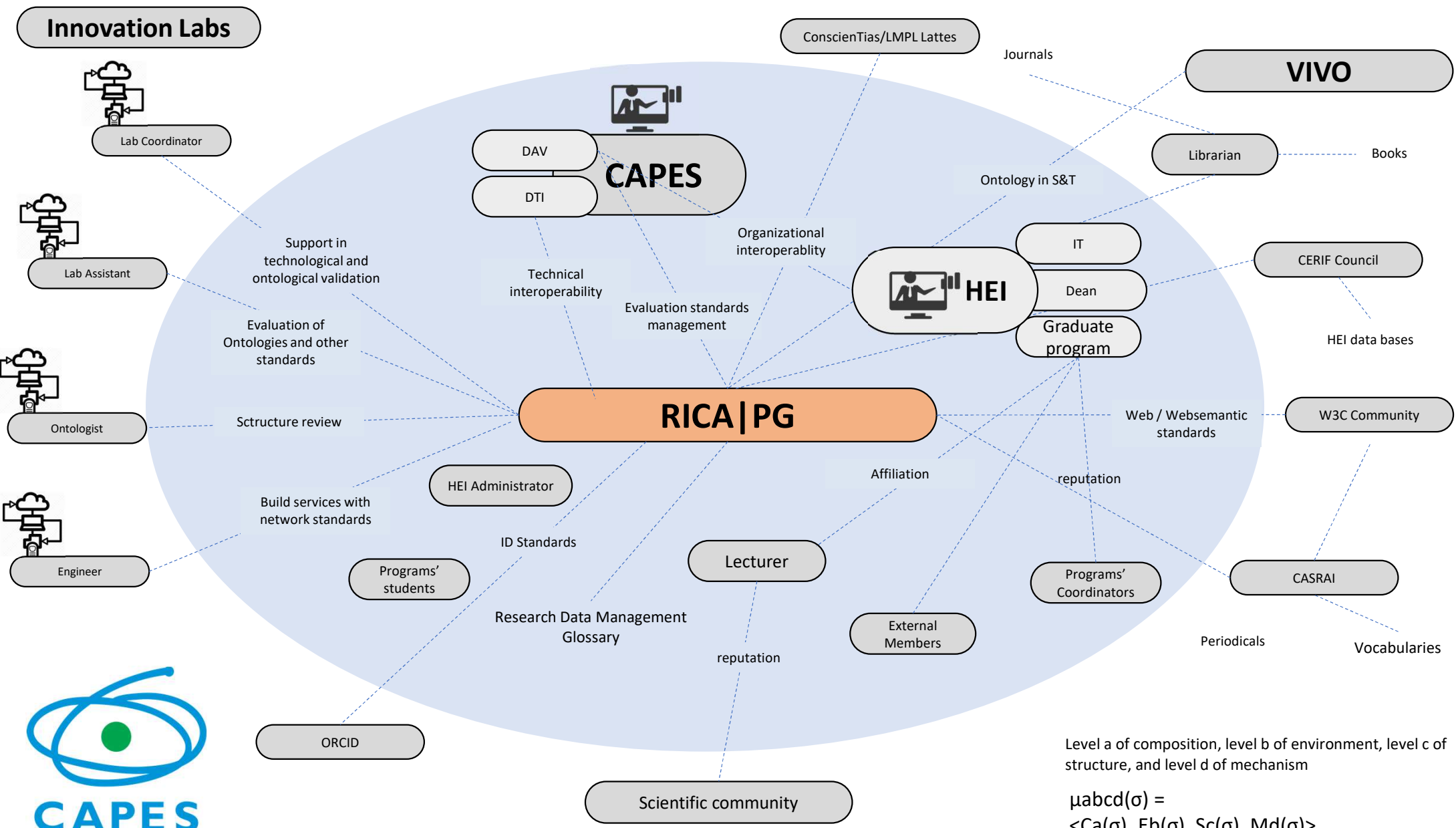


*The **RICA|PG** Network builds lasting connections for the sharing and reuse of graduate data within the scope of CAPES' actions, through standardization and semantic interoperability.*



<http://capes.gov.br/36-noticias/10323-projeto-criara-rede-de-compartilhamento-de-informacoes>





Level a of composition, level b of environment, level c of structure, and level d of mechanism

$$\mu_{abcd}(\sigma) = \langle Ca(\sigma), Eb(\sigma), Sc(\sigma), Md(\sigma) \rangle$$

# Review



- RICA|PG is using part of what is the VIVO Governance to structure its own governance model.
- VIVO Ontology will be used as ontological resource for reengineering purposes as we will create an ontology for our national graduate program structures.
- RICA|PG will focus on semantics to enable interoperability and thus focus on ontology engineering practices within the network.
- What elements of the programs will be captured by the system?
  - Organization Model (Courses);
  - Person (Faculty , Students);
  - Awards;
  - Thesis and dissertations;
  - Research projects;
  - Publications (pubs).

# Rede RICA|PG - Brazilian Network of the Scientific and Graduate Communities Governance



1. CAPES
2. UFRRJ
3. UFAM
4. UFPE
5. UFRGS
6. CEFET-MG
7. UPE
8. UEM
9. Mackenzie
10. USP
11. UNESP
12. PUC-RS
13. Fiocruz
14. UDESC



# Innovation Lab Pool - Next steps

- Prepare the algorithms to solve situations in the local reality of the HEI, such as disambiguation;
- Provide a toolkit;
- Support the use of laboratory results as an object of reengineering ontological resources in the construction/adaptation of new vocabularies;
- Collaborate with the Advisors to validate and engineer ontologies and vocabularies (Network);
- Provide support to the semantic and technical interoperability processes that occur between members of the RICA Network | PG.



Thank you!



**Manoel Brod Siqueira**

Information Management Coordinator / CAPES

[manoel.siqueira@capes.gov.br](mailto:manoel.siqueira@capes.gov.br)

[www.capes.gov.br](http://www.capes.gov.br)

